DOCUMENT RESUME

ED 449 242 UD 033 925

AUTHOR	Ku, Inhoe; Plotnick, Robert D.
TITLE	Do Children from Welfare Families Obtain Less Education? Discussion Paper.
INSTITUTION	Wisconsin Univ., Madison. Inst. for Research on Poverty.
REPORT NO	IRP-DP-1217-00
PUB DATE	2000-12-00
NOTE	47p.
AVAILABLE FROM	For full text: http://www.ssc.wisc.edu/irp/.
PUB TYPE	Reports - Evaluative (142)
EDRS PRICE	EDRS Price MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS	*Children; *Educational Attainment; Elementary Secondary Education; Higher Education; Low Income Groups; *Parent Background; Urban Youth; *Welfare Recipients
IDENTIFIERS	*Panel Study of Income Dynamics

ABSTRACT

This study estimates the relationship between parental welfare receipt and children's adulthood educational attainment. Data come from the Panel Study of Income Dynamics (PSID). The PSID is a longitudinal study of a nationally representative sample of U.S. families conducted by the Survey Research Center of the University of Michigan. Cross-sectional regression results confirm findings from previous studies that greater parental welfare receipt is significantly associated with children's poorer educational attainment. Fixed-effect regressions indicate that the relationship between parental welfare receipt and children's educational outcomes becomes weaker after controlling for unobserved family characteristics, but they do not eliminate the negative relationship. The relationship between parental welfare receipt and children's educational attainment is not uniform across childhood stages. Additional analyses suggest that parental welfare receipt is not negatively related to educational attainment if combined with at least quarter-time work by the mother. (Contains 9 tables and 83 references.) (Author/SLD)

Reproductions supplied by EDRS are the best that can be made
from the original document.

ED 449 242

Institute for Research on Poverty
Discussion Paper no. 1217-00

Do Children from Welfare Families Obtain Less Education?

Inhoe Ku
Department of Social Welfare
Seoul University

Robert D. Plotnick
Daniel J. Evans School of Public Affairs
Center for Studies in Demography and Ecology
University of Washington
E-mail: plotnick@u.washington.edu

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
✓ This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL IN MICROFICHE AND IN ELECTRONIC MEDIA FOR ERIC COLLECTION SUBSCRIBERS ONLY HAS BEEN GRANTED BY

B. Henn
Institute for Research on Poverty

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

2A

December 2000

The authors thank Shelly Lundberg, Gunnar Almgren, and Richard Weatherley for their helpful comments on this research.

IRP publications (discussion papers, special reports, and the newsletter *Focus*) are available on the Internet. The IRP Web site can be accessed at the following address: http://www.ssc.wisc.edu/irp/

UD033925

BEST COPY AVAILABLE

Abstract

This study estimates the relationship between parental welfare receipt and children's adulthood educational attainment. Data come from the Panel Study of Income Dynamics. Cross-sectional regression results confirm findings from previous studies that greater parental welfare receipt is significantly associated with children's poorer educational attainment. Fixed-effect regressions indicate that the relationship between parental welfare receipt and children's educational outcomes becomes weaker after controlling for unobserved family characteristics, but they do not eliminate the negative relationship. The relationship between parental welfare receipt and children's educational attainment is not uniform across childhood stages. Additional analyses suggest that parental welfare receipt is not negatively related to educational attainment if combined with at least quarter-time work by the mother.

Do Children from Welfare Families Obtain Less Education?

At the program's peak in 1994, an average of 5 million families were receiving Aid to Families with Dependent Children (AFDC) each month. By June 1999, the number of families receiving Temporary Assistance for Needy Families (TANF) had dropped to 2.5 million. The total welfare caseload decreased by 50 percent in just 5 years (Administration for Children and Families, 1999). Various factors account for these changes, but one of the most important was federal welfare reform, which created the TANF program in 1996 (Ellwood, 2000).

This dramatic change has drawn attention to the well-being of poor children. There is growing concern that the current welfare reform may leave poor families with young children the most vulnerable (Chase-Lansdale and Brooks-Gunn, 1995; Collins and Aber, 1997; Duncan and Brooks-Gunn, 1997; Moore et al., 1995). However, the current policy direction does not look easily reversible. Among the public, many worry about the intergenerational transmission of "welfare culture" (Patterson, 1994).

There is little doubt that welfare improves the immediate well-being of children, but the long-term effects of welfare on children remain in dispute. Many empirical studies on the effects of welfare on children find a negative correlation between parental welfare receipt and children's socioeconomic outcomes. In particular, studies of children's educational outcomes show a fairly consistent and negative correlation (Corcoran, 1995). Yet, the findings from most research in this area are limited in several ways.

First, most previous studies have estimated standard regression models by relating youth outcomes to parental welfare receipt during a short period of childhood, usually during adolescence. The use of a short observation period may have biased estimates in previous studies. In addition, little is known about the effect of welfare received in early childhood.

Second, although previous studies have rather consistently found a negative correlation between welfare and children's adulthood outcomes after controlling for a wide array of background characteristics, it is unresolved whether or how much the negative correlation reflects causal links. The estimated effects of parental welfare use may incorporate the effects of unobserved disadvantages of

welfare families, which affect both welfare use and child outcomes. For example, research shows that members of welfare families are more likely to have health and mental health problems (Blank, 1989; Moffitt and Wolfe, 1992; Danziger et al., 1999).

Third, previous studies do not demonstrate the mechanisms by which welfare affects children. Though many relevant theories include the role of parental work as a key concept linking welfare to child outcomes, no studies have examined the implication for children of work among welfare mothers. Given that the recent welfare reform mainly aims at moving recipients into the work force as a solution to welfare dependency, this is an important question unanswered in previous studies.

This study examines whether parental welfare receipt is associated with children's educational attainment in young adulthood. We discuss empirical and theoretical backgrounds for this study in the next section. The third section explains the modeling methods, the sample drawn from the Panel Study of Income Dynamics, and the variables. Results from the analyses are provided in the fourth section. Discussion and conclusions follow in the final section.

BACKGROUND

Findings from Prior Empirical Studies

In the literature on the intergenerational effects of welfare, the most consistent findings come from studies of the intergenerational correlation of welfare use. Most studies find that the probability of a daughter receiving AFDC is significantly higher if her mother received welfare than if her mother did not, even after controlling for a large number of covariates (Gottschalk, 1992, 1996). In research on nonmarital births, some studies find that daughters from welfare families are more likely to have nonmarital births as a teenager (Plotnick, 1990; Duncan and Hoffman, 1990; Gottschalk, 1992, 1996), although An, Haveman, and Wolfe (1993) and Haveman and Wolfe (1994) find a negative but insignificant effect of maternal welfare receipt. Findings from studies of the effects of maternal welfare

use on children's work behaviors and earnings are inconsistent (Corcoran and Adams, 1995; Corcoran, 1995). Findings of 11 relevant studies on the effects of maternal welfare use on schooling are fairly consistent (McLanahan, 1985; Hill and Duncan, 1987; Haveman, Wolfe, and Spaulding, 1991; Brooks-Gunn et al, 1993; Duncan, 1994; Duncan and Yeung, 1995; Knox and Bane, 1994; Haveman and Wolfe, 1994; Peters and Mullis, 1997; Teachman et al., 1997; and Boggess, 1998). All except Haveman and Wolfe (1994), Knox and Bane (1994), and Teachman et al. (1997) find a negative effect on any measure of children's educational attainment.

Effects of Welfare by Developmental Stages

Most studies measure maternal welfare use for a few years, generally during a child's adolescence. Wolfe et al. (1996) find that measures of family experiences during a limited childhood period are only weak proxies for longer-duration measures, and that empirical estimates using a measure of limited duration are biased. Such a bias may be especially severe for intermittent events, such as welfare receipt. Many single-mother families participate in welfare for a short duration, while some of them receive welfare for a much longer time (Bane and Ellwood, 1994). Thus, families receiving welfare during an observed short period are not representative of the welfare population and more heavily represent long-term welfare families. Selection of short observation periods in previous studies may overestimate the effects of welfare since such effects may be positively associated with the length of welfare receipt.

Furthermore, estimates in previous studies do not tell us about the effect of welfare receipt during early childhood. There are reasons to expect that the effects of parental welfare receipt on child outcomes may differ across developmental ages. A developmental perspective holds that events or transitions in an individual life have long-lasting effects, redirecting subsequent life trajectories, and the effects of those events partly depend on a child's resources and prior experiences (Elder, 1985). This perspective posits

that events in childhood have differential effects by developmental timing. Welfare may affect children through different mechanisms in different developmental stages.

One obvious way in which welfare may affect children is through a change in family economic resources. Economic theory posits that parents invest monetary resources and time in the human capital of their children, considering benefits and costs (Becker, 1981; Becker and Tomes, 1986). The human capital theory suggests that additional economic resources from welfare increase parental investment in children by reducing the cost.

Recent studies report that family income during early childhood has a larger positive effect on children's completed years of schooling (Duncan et al., 1998; Levy and Duncan, 2000). The findings are consistent with the view, dominant in child developmental psychology, that intellectual development in early childhood has a persistent effect on later educational attainment. Early experiences have a significant effect on brain development. Delayed cognitive development in the early years may lead to mental retardation and poor school readiness. Poor school readiness results in low academic development and school dropout (Brooks-Gunn, 1995; Chase-Lansdale, 1998; Ramey and Ramey, 1998).[1] A recent study in economics (Heckman, 2000) also presents a life-cycle perspective on human capital formation. This study emphasizes the cumulative nature of human capital formation and the significance of family income at an early age in fostering human capital.

There is an additional reason to expect a stronger positive effect of welfare during early childhood. AFDC recipients were eligible for Medicaid and food stamps and given priority in getting housing subsidies. These sources of in-kind income may protect children from hunger, malnutrition, medical risks, and a hazardous home environment. Young children may particularly benefit more from

---

[1]Ramey and Ramey (1998) indicate mediating mechanisms by which better early development persists: (1) a child's acquired intellectual skills allow the child to learn more from later experiences; (2) the child is motivated to look for further learning experiences; and (3) the child has an access to greater and supportive environmental opportunities provided by others, such as parents, teachers, and peers. Entwisle and Alexander (1989) also suggest that poor school readiness may lead to a bad reputation among teachers or peers, and the social identity, internalized by children themselves or labeled by others, may hinder subsequent academic achievement.

such forms of in-kind income. Perinatal and early childhood medical care and nutritional status are related to various indicators of young children's well-being, such as low birth weight, growth, lead poisoning, and cognitive development, which in turn affect later school achievement (Brooks-Gunn, Duncan, and Maritato, 1997). These services also may improve children's education by allowing parents to allocate more economic resources to children's education (Currie, 1995, 1998).

Welfare receipt may change cultural and psychological traits of parents and children as well as family income. Because receiving welfare may change multiple dimensions of the family environment, predicting the effect of welfare across developmental stages is more complicated than predicting the corresponding effects of income alone.

The welfare culture hypothesis posits that welfare adversely affects what poor parents and children believe. Murray (1984) argues that the welfare system undermines the moral character of poor people by rewarding no work and family breakups and thus changing conceptions of desirable behaviors. Alternatively, Mead (1986, 1992, 1997a, 1997b) argues that nonworking parents on welfare may adversely affect children's preferences for work and economic independence. To him, welfare is a problem mainly because it removes the pressure to work among recipients.

The welfare culture hypothesis suggests that adolescents will be most seriously and negatively affected by parental welfare receipt. Although cultures and beliefs embedded in family routines and parent-child relationships may affect children's personality from very early ages (Lewis, 1969; Sroufe and Fleeson, 1986), adolescents may more actively internalize parental values and behaviors by observational learning.

Social psychological theories propose other potential links between welfare and children. Ellwood (1994) applies Atkinson's (1964) expectancy model to explain the effects of welfare participation on a recipient's self-efficacy. Under AFDC, work subjected a woman to humiliating scrutiny and often resulted in a reduced welfare check and a medical risk for her children. This barrier to work deprived welfare mothers of opportunities to regain a sense of control over their lives.

Welfare-stigma perspectives emphasize the devastating effect of welfare labeling on a recipient's self-esteem (Rainwater, 1982; Goodban, 1985; Nichols-Casebolt, 1986; Elliott, 1996). Welfare recipients lose self-esteem and become isolated, since society defines them as deviant, and recipients share in society's negative evaluations of them. Welfare stigma also may have direct social and psychological effects on children. Some studies have suggested that welfare children are stigmatized by other children and teachers (Rainwater, 1982; Popkin, 1990; Seccombe, 1999; Scott et al., 1999).

The social psychological approaches suggest that negative effects of parental welfare receipt will be stronger during adolescence. Parental welfare receipt may reduce adolescents' self-concept. Adolescents may internalize parental failures in achieving economic independence and be more conscious of negative societal attitudes toward welfare receipt. Children's self-concept has been identified as a key determinant of their behaviors (Rutter, 1987; Rosenberg, Schooler, and Schoenbach, 1989). Adolescents' socioemotional disturbance may have more enduring negative consequences, since they are in transition into multiple lines of adult activities, from work to marriage and childbirth (Elder, 1985; McLanahan and Sandefur, 1994).

Role of Parental Work

Most theories include parental work as one of the key concepts linking welfare to the well-being of poor families and children, although these theories take different positions in regard to the causes of nonwork or less work of welfare parents.

Economic theory suggests that welfare has negative incentive effects on poor parents' work behaviors. The disincentive effects may have negative effects on children's education. According to economic theory, the welfare system increases the costs of work, since poor people who work are less likely to be eligible for benefits or will qualify for less assistance. Research shows that the AFDC program generated nontrivial work disincentives (Danziger, Haveman, and Plotnick, 1981; Moffitt, 1992).

Mead (1986, 1992, 1997a, 1997b) proposes the role of work as a central concept in the process of the intergenerational transmission of welfare culture. He argues that children are not well socialized by nonworking parents to be disciplined workers, and children from welfare families put less value on the benefits of work and education. According to his argument, government should assume the socializing role by imposing work requirements on recipients.

Social psychological approaches also emphasize parental work. The expectancy model suggests that a successful transition to work and economic independence helps recipients to regain self-efficacy. In this theory, a critical problem of the welfare system is that welfare aggravates a sense of failure among recipients by impeding recipients' attempts to work (Ellwood, 1994). The welfare-stigma approach suggests that achieving economic independence through work is essential for recipients to recover their self-esteem. Maternal work has become a norm. Mothers on welfare are scorned as idle and morally deficient. Recipients feel inferior and personally responsible for being on welfare when comparing themselves with women who work and achieve economic independence (Elliott, 1996).

Research has shown that working is more prevalent among welfare mothers than is generally known (Edin and Lein, 1996; Harris, 1993, 1996). Studies document that many welfare mothers combine work and welfare to make ends meet. Most studies of low-income families indicate that a mother's employment improves children's cognitive development (Moore and Driscoll, 1997; Zaslow and Emig, 1997), which in turn is likely to increase their educational attainment. Yet, no studies have examined the implication of work among welfare parents for their children's education (or other indicators of well-being).

METHODS, DATA, AND VARIABLES

Methods

We first estimate cross-sectional models that are comparable to those in the literature. We estimate linear regression models for the number of years of completed schooling and logit models for high school graduation. The models are specified as

$$Y_{if} = \alpha X_f + \beta Z_{if} + \gamma W_{if} + \mu_f + \varepsilon_{if}, \quad (1)$$

where the dependent variable Y_{if} is educational attainment for the ith child in family f. The outcomes are a function of family-specific variables X_f, individual-specific variables Z_{if}, and a measure of maternal welfare receipt W_{if}. The error term has two components: a family-specific error term μ_f that includes omitted characteristics that are constant across siblings, and a random error term for a child.

A critical problem in the above model is that parental welfare receipt likely is endogenous to unobserved family characteristics. To the extent that a mother's welfare participation (W_{if}) is correlated with unobserved family characteristics (μ_f), as Currie and Cole (1993) note, the regression estimate (γ) may be biased due to omitted unobserved variables.

Fixed-effect estimation using a sibling sample is a standard approach to control for unobserved family characteristics. Siblings are likely to be more alike than randomly selected pairs of individuals on a variety of unobserved socioeconomic dimensions as well as observed dimensions. Differencing equation 1 across siblings yields

$$Y_{2f} - Y_{1f} = \beta(Z_{2f} - Z_{1f}) + \gamma(W_{2f} - W_{1f}) + \varepsilon_{2f} - \varepsilon_{1f}, \quad (2)$$

where the effect of unobserved family characteristics (μ_f) has been eliminated and the explanatory variables are in differenced forms. Any variables that do not differ between siblings are dropped because the effects of such variables cannot be estimated.

The fixed-effect approach has been used in other areas (Plotnick and Hoffman, 1999; Aaronson, 1998; Duncan et al., 1998, to cite a few recent studies). In the literature on the intergenerational effect of

welfare, only two studies have used this method to estimate the effects of parental welfare receipt on outcomes during infancy or early childhood (Currie and Cole, 1993; Levine and Zimmerman, 2000). This study is the first to attempt fixed-effect estimation of the long-term effects of parental welfare on children's outcomes as young adults.

Data

The data come from the Panel Study of Income Dynamics (PSID), 1968–1997. The PSID is a longitudinal study of a nationally representative sample of U.S. families conducted by the Survey Research Center at the University of Michigan (Hill, 1992). The PSID is the only available survey data set that enables us to observe annually the whole childhood history of individuals and their adulthood educational attainment with a relatively large sample size.

The basic sample for conventional cross sectional analyses includes those individuals who remained in the survey for each year from birth to age 14 and whose years of schooling are observed at age 23 or at age 19.[2] The sample for models of completed schooling years by age 23 consists of 1,219 children who were born between 1967 and 1974 and turned 23 between 1990 and 1997. The sample for models of high school graduation by age 19 includes 2,512 children who were born between 1967 and 1978 and turned 19 between 1986 and 1997.[3]

---

[2]The sample is restricted to children who are the PSID "sample members." "Nonsample member" children are not tracked when they move out of the PSID sample families (Hill, 1992). Initially, 4,284 children born between 1967 and 1978 were the PSID "sample members." They were 19 or older by 1997. While some are dropped from the sample due to nonresponse for one or more years, many are dropped due to attrition. Fitzgerald, Gottschalk, and Moffitt (1998) show that the attrition bias in the intergenerational study using the PSID is quite small and usually not significant. Falaris and Peters (1998) also report that attrition does not affect estimates of the effects of family background variables on schooling in the PSID.

[3]The sample size for the models of schooling years is less than half of the sample size for the models of high school graduation. About a 40 percent reduction is caused by the reduced range of birth cohorts. The rest is due to attrition between ages 19 and 23.

The sibling sample includes children drawn from the basic sample who have at least one sibling in the basic sample. The sibling sample consists of all possible sibling pairs in a family.[4] For example, if a family has four children, the number of pairs is six. This method increases the number of sibling pairs from a family, but sibling pairs from the same family may not be independent observations. Accordingly, we use Huber standard errors in the fixed-effect estimation.

Some of the pairs have the same birth year or are only a year apart in age. These pairs should share almost the same family environments and welfare backgrounds. In addition, if siblings are very close in age, differencing maternal welfare receipt is more likely to increase measurement error. Therefore, sibling pairs are included in the analyses only if the age difference is at least 2 years. The sibling sample for models of completed schooling years by age 23 consists of 269 pairs. The sample for models of high school graduation by age 19 includes 218 sibling pairs.[5] We also estimate the fixed-effect models for years of completed schooling by age 19. Although the variation in the years of completed schooling by age 19 should be smaller, it may be possible to detect more subtle effects of childhood welfare in the fixed-effect models, given the increased number of pairs in the estimation. The corresponding number for models of schooling years by age 19 is 796.

Variables

Children's educational attainment is measured using completed years of schooling by age 23 and high school graduation by age 19. In some studies of children' educational attainment, the samples include children whose years of schooling are observed at different ages ranging from 19 to as late as mid-20s. It is obvious that for youths in this age range, a year difference in ages often means a year

---

[4]In many previous studies, as Plotnick and Hoffman (1999) note, researchers have arbitrarily selected two siblings per family. This may aggravate the selection bias and result in smaller sample size and a smaller amount of variation in the variables of interest.

[5]When one estimates logit models, the effect of unobserved family characteristics is swept away only by conditioning on sibling pairs with different outcomes (Chamberlain, 1980). This restriction reduces the sample size, since sibling pairs with the same outcome must be dropped.

difference in years of schooling. This possibly leads to a biased estimate if the ages of individuals are not random with respect to the relationship between parental welfare receipt and children's education. For this reason, our study measures children's educational outcomes at a uniform age.

The central independent variables are three measures of maternal welfare use during the first 15 years of childhood.[6] The first measure is simply whether a mother was ever on welfare during the 15 years. This is measured by identifying whether a mother had any welfare income during the period. The second is the number of years on welfare. For most of the period, the PSID asks only about annual income. If a mother reported any welfare income in a given year, the year is counted as a year on welfare. The last is annual real welfare income (in 1992 dollars) averaged over the 15 years. Since the amount of annual welfare income in a family increases as a mother receives welfare for more months, this measure captures, to some extent, variation in monthly welfare participation in a given year. These measures are aimed to capture the extent of parental welfare receipt during childhood.[7]

In the analyses by developmental stages, the three welfare measures are constructed separately for three childhood subperiods, each 5 years long: from birth to 5, from 6 to 10, and from 11 to 15. These three periods correspond roughly to early childhood, middle childhood, and early adolescence.

The models have many family and individual characteristics as controls. These include basic individual characteristics such as race, gender, birth order, and the number of siblings averaged over

---

[6]We follow Bane and Ellwood (1994), with minor changes, to construct the welfare measure in this study. Our study restricts welfare income to that of female heads with children. The PSID includes separate questions for AFDC income, Supplementary Security Income, Social Security, and other welfare. This study includes other welfare income as AFDC income. It is known that respondents in other studies often confused "other welfare" with AFDC and reported a considerable amount of AFDC income as "other welfare" (Bane and Ellwood, 1994; Gottschalk, 1996).

[7]Those measures partly depend on factors other than the extent of a parent's reliance on welfare. For example, the same values of the income measure may reflect different lengths of welfare receipt for individuals living in different states since the benefit level varies from state to state. In the fixed-effect estimation this may be less problematic since siblings usually live in the same state in childhood.

childhood years. Family characteristics include grandparents' poverty status and parents' education.[8] Family income is measured as family cash income plus AFDC and food stamp benefits averaged over the childhood period (in 1992 dollars).

The models also include other variables that have been reported in the literature to affect children's education. We include mother's age at the birth of the individual, proportion of years in childhood when a child lived with a single parent, proportion of years when a parent's marital status changed, father's and mother's annual work hours averaged over the childhood years, proportion of years when a mother worked, proportion of years when the head was disabled, and proportion of years when a family moved. Other control variables include the county unemployment rate averaged over the childhood years and the proportions of years lived in a region and a residential location. Region is categorized as south, west, northeast, and northcentral. Residential location is measured as a dummy variable indicating whether or not a child lived in an SMSA. Finally, a linear control for birth cohort is included in all models. It may be necessary to control for secular trends in education levels because the data include children from 12 birth cohorts.

The average number of years of schooling completed by age 23, weighted by the PSID sample weights, is 13.1.[9] The high school graduation rate by age 19 is .80. About 14 percent of children were ever on welfare between birth and age15. The average number of years on welfare is less than 0.9. Among children who experienced welfare at any time between birth and age15, the average is 6.5 years.

One concern with a family fixed-effect approach is that the sibling sample may not be representative because it is more likely to consist of children from larger families. The representativeness of the sample in this study does not appear to be a serious problem. Children's educational outcomes and

---

[8]Information on father's education and other characteristics, such as annual work hours, is not available for some children. The main reason is that those children were born to a single mother. To handle missing variables, we assigned a missing value code of −1 and included missing value dummy variables, following Cohen and Cohen (1983).

[9]The PSID oversampled low-income families. This unequal selection probability problem is dealt with using the PSID sample weights assigned to individuals (Hill, 1992).

individual and family characteristics in the sibling sample are very similar to those in the individual sample. Table A1 shows the descriptive statistics.

RESULTS

Cross-Sectional Results

Table 1 provides zero-order correlation coefficients of childhood welfare experiences across childhood periods in the individual sample. Contact with welfare is highly correlated between each childhood period. The high correlation exists mainly because parents of the majority of children did not use welfare in any stage and because the majority of children who ever experienced welfare in any stage were on welfare during more than one childhood stage. Table 2 provides the evidence for this second reason. Row 4 shows that 65 percent of children with welfare backgrounds began involvement with welfare during early childhood. Row 2 (3) shows that, among children on welfare in middle childhood (early adolescence), 65 (62) percent also received it in early childhood. These figures suggest that the composition of children on welfare does not change dramatically from stage to stage. Hence, if there are stage-specific effects of welfare, those effects are unlikely to be due to differences in the kinds of children exposed to welfare, and more likely to reflect real stage-specific differences in impact.

Table 3 shows the coefficients on parental welfare receipt estimated from the models of years of schooling by age 23. Columns 1 through 3 show results from the cross-sectional analyses that use whole childhood measures of parental welfare receipt. Each measure of welfare use is entered by itself. Columns 4 through 6 present results from the cross-sectional analyses that measure welfare use separately during the three childhood stages. The three stage-specific measures are jointly included in each model.

Other control variables, which are not childhood-specific, are added to the models in a hierarchical manner. The base models in columns 1 and 4 include the number of years on welfare in childhood and most exogenous variables, such as race, gender of child, birth order, poverty status of a

TABLE 1
Correlation between Number of Years on Welfare during Each Childhood Period

	Bivariate Correlation Coefficients			
Childhood Welfare	(1)	(2)	(3)	(4)
(1) Years on welfare, age 0–5	1.000			
(2) Years on welfare, age 6–10	.700***	1.000		
(3) Years on welfare, age 11–15	.573***	.776***	1.000	
(4) Years on welfare, age 0–15	.842***	.934***	.888***	1.000

Source: Panel Study of Income Dynamics

TABLE 2
Distribution of Entrance into Welfare by Childhood Stage

Childhood Stage	# of Children Receiving Welfare in Stage	% of Children Who Started Receiving Welfare in Stage (1)	(2)	(3)
(1) Age 0–5	369	100.0	0	0
(2) Age 6–10	415	65.1	34.9	0
(3) Age 11–15	364	61.8	24.2	14.0
(4) Age 0–15	565	65.3	25.7	9.0

Source: Panel Study of Income Dynamics

TABLE 3

Effect of Different Measures of Parental Welfare Receipt on Children's Completed Years of Schooling by Age 23, Cross-Sectional Estimates

Variables	Childhood Period	(1) Model 1	(2) Model 2	(3) Model 3	Childhood Period	(4) Model 1	(5) Model 2	(6) Model 3
Ever on Welfare	Age 0–15	-.853***	-.512***	-.319*	Age 0–5	-.493**	-.398**	-.455**
		(.137)	(.136)	(.183)		(.194)	(.181)	(.203)
					Age 6–10	-.218	-.004	-.072
						(.222)	(.208)	(.222)
					Age 11–15	-.572**	-.509**	-.412**
						(.221)	(.203)	(.207)
Years on Welfare	Age 0–15	-.110***	-.081***	-.086***	Age 0–5	-.099	-.094*	-.140**
		(.017)	(.017)	(.023)		(.061)	(.057)	(.063)
					Age 6–10	-.073	-.051	-.057
						(.069)	(.064)	(.066)
					Age 11–15	-.160**	-.104*	-.081
						(.062)	(.057)	(.057)
Annual Welfare Income (in $1,000)	Age 0–15	-.175***	-.126***	-.105***	Age 0–5	-.049	-.039	-.049
		(.029)	(.028)	(.034)		(.032)	(.030)	(.031)
					Age 6–10	-.033	-.033	-.020
						(.042)	(.038)	(.039)
					Age 11–15	-.110**	-.059	-.040
						(.051)	(.047)	(.047)

Notes: N=1219; standard errors in parentheses.

Model 1 also includes race, sex, birth order, poverty status of grandparents, religion, region of residence, location of residence (SMSA or not), proportion of years when head was disabled, county unemployment rate, and birth cohort.

Model 2 adds parents' education, average family income, and family size.

Model 3 adds mother's age at individual's birth, number of siblings, proportion of years with one parent, proportion of years with head other than parents, proportion of years when parents' marital status changed, father's and mother's work hours, proportion of years when mother worked, and proportion of years when family moved.

* = significant at 10% level, ** = significant at 5% level, *** = significant at 1% level.

grandparent, proportion of years when the household head was disabled, the county unemployment rate averaged over childhood periods, birth cohort, religion, region, and residential location during childhood. In columns 2 and 3 and columns 5 and 6, additional control variables are added in a hierarchical manner, since those are important correlates with children's educational attainment but also are likely to be endogenous to welfare use. Columns 2 and 5 add parental education, family income, and family size. Columns 3 and 6 further add mother's age at individual's birth, number of siblings, proportion of years when child lived with one parent, proportion of years when parental marital status changed, annual work hours of father and mother, proportion of years when mother worked during childhood, and proportion of years when family moved. To simplify the table, we omit the coefficients on all control variables.

The first panel shows coefficients on ever being on welfare, while the second and third panels each show coefficients on the number of years on welfare and annual welfare income. In all three measures and all models, the relationship between maternal welfare use and children's years of schooling is negative and significant. Column 1 shows that ever being on welfare is associated with a 0.85 year decrease in years of schooling by age 23. An additional year on welfare is associated with 0.1 year decrease in years of schooling. An additional $1,000 welfare income per year is associated with 0.17 year decrease in the years of schooling. Given that the sample average of the number of years on welfare (welfare income) is about 1.5 ($600), this means that welfare receipt is associated with about a 0.15 (0.12) year decrease in schooling, on average. When parental education and family income are added in the models in column 3, the magnitude of the effect falls by about a third. However, adding the other observed family characteristics in columns 4 through 6 does not change the size of the effect very much.

Results from the models of high school graduation by age 19 also show that all three measures of maternal welfare use are negatively and significantly associated with the probability of high school graduation in all the models. These results confirm findings from most past research.

The results are robust to various specifications of family income. To test the sensitivity of the coefficients on maternal welfare use, we used five different specifications of family income. These

include a linear specification, a spline function using a $20,000 cutoff, the natural logarithm of family income, a set of dummies for ranges of the income-to-need ratio, and a proportion of number of years lived below the poverty line. The estimated effects of maternal welfare use are qualitatively the same, although the coefficients on family income vary substantially. (The results are available from the authors upon request.)

Columns 4 through 6 present childhood-stage-specific effects of welfare use on years of schooling by age 23. The first panel shows that ever being on welfare between ages 0 and 4 or between ages 10 and 14 is negatively and significantly associated with children's years of schooling. The second and third panels show the results using continuous measures of welfare use. With fewer controls, the number of years on welfare and welfare income between ages 10 and 14 have larger and significant effects on children's schooling. On the other hand, the effects of maternal welfare between ages 0 and 4 become larger when more controls are added, and significant when the number of years on welfare is used as a welfare measure.

The corresponding results from the high school graduation models show only a slight difference. The number of years on welfare between ages 10 and 14 has a strong and consistently significant relationship with the probability of high school graduation, but annual welfare income during middle childhood has the most consistently significant relationship with the probability of high school graduation.

Overall, the results show that maternal welfare use during early adolescence (age 10–14) has the strongest negative effect in terms of both significance level and magnitude. Maternal welfare use during early childhood (age 0–4) has a somewhat smaller but significant effect, while that during middle childhood (age 5–9) usually does not have a significant effect. These results are consistent with findings from previous research (Furstenberg, Brooks-Gunn, and Morgan, 1987; Furstenberg, Levine, and Brooks-Gunn, 1990; Brooks-Gunn, Guo, and Furstenberg, 1993; Haveman, Wolfe, and Spaulding, 1991).

Fixed-Effect Results

Table 4 presents basic estimates from fixed-effect models. For comparison, we also report cross-sectional estimates using the sibling sample in the first three columns. These estimates are virtually the same as the cross-sectional estimates using the full individual sample. The model numbers in Table 4 correspond to those in Table 3. The specifications of the fixed-effect models are the same as those of the cross-sectional models, except that all the variables in the fixed-effect models are constructed as the differences between two children in a sibling pair. Race, religion, mother's and father's education, and grandparent's poverty status are dropped since those are the same for siblings. Mother's age at individual's birth is also dropped since the difference between siblings is the same as the difference in the value of the birth cohort variable.[10]

The first panel presents the results from the model for years of completed schooling by age 23. The second panel shows the estimates from the model for high school graduation by age 19. The results from the new models for years of completed schooling by age 19 are shown in the third panel. Although the variation in the years of completed schooling by age 19 should be smaller, it may be possible to estimate more precise effects of welfare use due to the increased number of pairs in the estimation.

In all the cross-sectional models reported in columns 1 through 3, the relationship between parental welfare receipt and adulthood educational attainment is negative and significant. Columns 4 through 6 in the first panel show that the negative effect of the number of years on welfare on schooling years by age 23 becomes only marginally significant at the 10 percent level in the first two fixed-effect models and insignificant in the last model. The negative relationship between annual welfare income and children's years of schooling, however, remains consistently significant even after controlling for unobserved family characteristics.

---

[10]The number of sibling pairs with a difference in "ever being on welfare" status is only 33. Therefore this measure of welfare use is not analyzed.

TABLE 4
Effect of Parental Welfare Receipt on Children's Educational Attainment Estimated with Sibling Sample

	Cross-Sectional			Fixed-Effect		
	(1) Model 1	(2) Model 2	(3) Model 3	(4) Model 1	(5) Model 2	(6) Model 3
			Years of completed schooling by 23			
Years on Welfare	-.112***	-.088***	-.082***	-.224*	-.237*	-.298
	(.021)	(.022)	(.032)	(.124)	(.125)	(.183)
Annual Welfare Income	-.167***	-.128***	-.092**	-.570***	-.596***	-.744***
(in $1,000)	(.036)	(.034)	(.043)	(.153)	(.162)	(.250)
# of Cases (pairs)		813 cases			269 pairs	
			High school completion by 19			
Years on Welfare	-.143***	-.086***	-.086***	-.159	-.158	-.244*
	(.014)	(.017)	(.024)	(.099)	(.101)	(.147)
Annual Welfare Income	-.279***	-.174***	-.144***	-.375**	-.350**	-.492**
(in $1,000)	(.036)	(.038)	(.047)	(.152)	(.165)	(.249)
# of Cases (pairs)		1561 cases			218 pairs	
			Years of completed schooling by 19			
Years on Welfare	-.077***	-.051***	-.038**	-.092***	-.093**	-.111*
	(.009)	(.010)	(.015)	(.034)	(.037)	(.057)
Annual Welfare Income	-.122***	-.077***	-.041*	-.060	-.052	-.050
(in $1,000)	(.016)	(.017)	(.021)	(.079)	(.079)	(.084)
# of Cases (pairs)		1419 cases			796 pairs	

Notes: Standard errors (Huber standard errors of fixed-effect estimates) in parentheses. Cross-sectional models also contain the same controls as the corresponding model in Table 3. Fixed-effect models: Model 1 also includes a dummy for a female and male pair, a dummy for a first-born and younger pair, and a dummy for a pair missing birth order. Region of residence during childhood, location of residence (SMSA or not), proportion of years with head disabled, unemployment rate, and birth cohort are included in a differenced form. Model 2 adds average family income and family size (in a differenced form). Model 3 adds number of siblings, proportion of years with one parent, proportion of years with head other than parent, proportion of years when parents' marital status changed, father's work hours, mother's work hours, proportion of years when mother worked, and proportion of years when family moved (in a differenced form).

*= significant at 10% level, ** = significant at 5% level, *** = significant at 1% level

Columns 4 through 6 in the second panel show that the number of years on welfare has a marginally significant effect on the probability of high school graduation in only one model, while annual welfare income has a consistently negative and significant effect. In models for years of schooling by age 19, the number of years on welfare has a significant effect in the first two models and becomes marginally significant in the last model. On the other hand, annual welfare income does not have a significant effect on years of schooling by age 19.

We test for the sensitivity of the estimates to various specifications of family income. We add to model 1 a differently specified measure of family income, such as natural logarithm of family income, income-to-need ratio, and proportion of years in poverty. The results show that the estimates of the effect of welfare are robust to different specifications of family income. There is almost no change in the significance level, and the sizes of coefficients are nearly equal. Among various income specifications, proportion of years in poverty has a significant effect only in the model of schooling years by age 19.

Overall, the results show that the negative relationship between parental welfare receipt and children's educational attainment becomes weaker but remains significant when unobserved family characteristics are controlled for.

Table 5 presents the childhood-stage-specific effects of parental welfare receipt on the three educational outcomes. Columns 1 through 3 provide cross-sectional results using the sibling sample. The results show a pattern very similar to that of cross-sectional results using the individual sample, although the significance levels drop due to the decreased sample size. Parental welfare receipt during early adolescence most often has significant effects on children's educational attainment. Parental welfare receipt during early childhood shows significant effects in some models of the probability of high school graduation by age 19 and years of schooling by age 19. Welfare during middle childhood shows significant effects only in two models of high school graduation.

Columns 4 through 6 present fixed-effect results. The first three rows in each panel show that the number of years on welfare during early childhood has no significant effect in any of the models. The

TABLE 5
Childhood-Stage-Specific Effects of Parental Welfare Receipt on Children's Educational Attainment Estimated with Sibling Sample

	Cross-Sectional			Fixed-Effect		
	(1) Model 1	(2) Model 2	(3) Model 3	(4) Model 1	(5) Model 2	(6) Model 3
			Years of completed schooling by 23			
Years on Welfare						
Age 0–5	-.120 (.082)	-.121 (.077)	-.126 (.085)	-.087 (.201)	-.093 (.216)	-.205 (.268)
Age 6–10	-.028 (.085)	-.029 (.078)	-.023 (.084)	-.318*** (.113)	-.321*** (.117)	-.296* (.166)
Age 11–15	-.197*** (.072)	-.125* (.066)	-.108 (.069)	-.400** (.180)	-.411** (.178)	-.411* (.219)
Annual Welfare Income (in $1,000)						
Age 0–5	-.048 (.040)	.044 (.037)	-.039 (.040)	-.258*** (.080)	-.266*** (.084)	-.316***(.105)
Age 6–10	-.025 (.049)	-.037 (.044)	-.022 (.045)	-.190*** (.066)	-.194*** (.068)	-.176* (.094)
Age 11–15	-.109* (.056)	-.048 (.051)	-.034 (.053)	-.326* (.174)	-.325* (.181)	-.216 (.205)
# of Cases (pairs)		813 cases			269 pairs	
			High school completion by 19			
Years on Welfare						
Age 0–5	-.166** (.069)	-.099 (.073)	-.069 (.083)	.108 (.189)	.159 (.180)	.191 (.232)
Age 6–10	-.076 (.074)	-.043 (.074)	-.049 (.081)	-.350** (.156)	-.322** (.162)	-.422* (.221)
Age 11–15	-.216*** (.062)	-.143** (.064)	-.112* (.067)	-.508** (.215)	-.510** (.221)	-.592** (.247)
Annual Welfare Income (in $1,000)						
Age 0–5	-.086** (.040)	-.040 (.040)	-.030 (.042)	-.037 (.118)	-.027 (.118)	-.078 (1.32)
Age 6–10	-.088* (.046)	-.072* (.043)	-.064 (.045)	-.214** (.087)	-.212** (.092)	-.257** (.113)
Age 11–15	-.106** (.047)	-.056 (.044)	-.044 (.046)	-.151 (.152)	-.157 (.157)	-.187 (.166)
# of Cases (pairs)		1561 cases			218 pairs	
			Years of completed schooling by 19			
Years on Welfare						
Age 0–5	-.096*** (.035)	-.066* (.035)	-.048 (.039)	-.031 (.057)	-.025 (.057)	.002 (.074)
Age 6–10	-.043 (.038)	-.029 (.037)	-.021 (.039)	-.079 (.066)	-.071 (.065)	-.079 (.077)
Age 11–15	-.096*** (.033)	-.063** (.032)	-.046 (.033)	-.275*** (.086)	-.267*** (.085)	-.279*** (.088)
Annual Welfare Income (in $1,000)						
Age 0–5	-.060*** (.018)	-.039** (.018)	-.028 (.019)	-.017 (.035)	-.013 (.036)	-.007 (.042)
Age 6–10	-.024 (.021)	-.018 (.020)	-.004 (.021)	-.011 (.033)	-.010 (.031)	-.010 (.033)
Age 11–15	-.042* (.023)	-.022 (.022)	-.013 (.022)	.027 (.061)	.025 (.060)	.031 (.061)
# of Cases (pairs)		1419 cases			796 pairs	

Notes: Standard errors (Huber standard errors of fixed-effect estimates) in parentheses. Each model contains same controls as corresponding model in Table 4.

*= significant at 10% level, ** = significant at 5% level, *** = significant at 1% level.

number of years on welfare during middle childhood has significant and negative effects on years of schooling by age 23 and the probability of graduating high school by age 19. It does not have any significant effect in the models of years of schooling by age 19. Conversely, the number of years on welfare during early adolescence has a consistently negative and significant effect on the three educational outcomes. The coefficients on the early adolescence measure are always the largest.

The second three rows in each panel show that the effects of welfare income do not have a consistent pattern across the three outcomes. In the models of years of schooling by age 23, annual welfare income during early childhood has the largest negative effect, and welfare income during middle childhood shows a consistently significant effect. Welfare income during adolescence has marginally significant effects in two models. In the models of high school graduation by age 19, only annual welfare income during middle childhood has a significantly negative effect. The third panel shows that welfare income in any childhood period does not have a significant effect on the number of years of schooling completed by age 19.

Sensitivity Tests

Welfare use may result from unobserved events and subsequent changes in a mother's unobserved characteristics, both of which may adversely affect children's academic development and educational attainment. If this is the case, the fixed-effect estimates may incorporate the negative influence of unobserved events and the estimates may be biased in a negative direction.

One way to assess the degree of this potential bias is to examine whether estimates of welfare's effects are sensitive to the inclusion of events for entering welfare in the models. Family structure changes and income changes are known to be main events leading to welfare participation. A reasonable assumption is that family structure changes or other unidentified events are more stressful events than only income changes, because the former changes are accompanied by serious income losses or need increases. We use the method in Bane and Ellwood (1994), with minor modifications, to classify events

for entering welfare into four categories: family structure change, income change, other change, and left-censored.[11] We add four dummy variables indicating each type of event to the cross-sectional models. The omitted category is never being on welfare.

Welfare entrance due to a family structure change or other events has a significantly negative effect on children's educational attainment in many models, while welfare entrance due to income changes does not have a significant effect in most models. However, the inclusion of the variables indicating each type of event does not change the effects of parental welfare receipt very much. In the cross-sectional models, maternal welfare use is significantly associated with children's education even after controlling for events for entering welfare.[12]

The same sensitivity test is not informative in the fixed-effect analyses. Among many sibling pairs, both siblings experience the same events and there is very little variation in the events. Yet, some evidence suggests that there are not serious biases due to the difference in underlying events. First, such a bias is more likely to occur if a sibling experiences maternal welfare use and a counterpart sibling does not. Yet, in most sibling pairs, both siblings experienced maternal welfare receipt if a sibling was ever on welfare. Second, the bias is less likely to be serious if the fixed-effect estimates are mainly based on long-term welfare (or high welfare income) families. It may be reasonable to assume that the independent effect of an unobserved event will fade away over time. We examined whether the fixed-effect results are

---

[11]We followed a mother's whole welfare history to find the year when she began using welfare. If a mother's status in her family changed from a wife or a dependent to a female head, or if a female head had a birth a year before, a year after, or in that year, her event for entering welfare is coded as a family structure change. If there was no change in family structure and if family income net of AFDC decreased by at least $1,000 (in 1992 dollars) in the year, her entering event is coded as an income change. If neither of the changes is found at the beginning of welfare, her entering event is coded as "other changes." An "other change" may also be the result of a change in family size caused by something other than a new birth, a move to a new county or state, or other unidentified events. If a mother was already on welfare in the beginning years of the survey (1967 or 1968), the mother was classified as left-censored because the entering event could not be identified.

[12]Although it is still possible that subsequent unobserved events after entering welfare may contribute to both longer-term welfare use and lower educational attainment, it is empirically difficult to sort out the independent effect of those events. A basic difficulty lies in the fact that it is hard to decide whether those subsequent events are independent of prior welfare experiences. It may not be legitimate to control for those unobserved changes in parental characteristics, given the strong theoretical arguments that welfare may change unobserved cultural or psychological traits of family members.

true for long-term welfare (or high welfare income) pairs. If either of a sibling pair experiences welfare for more than 5 years (has average welfare income more than $1,000), the pair is classified as a long-term welfare pair (a high welfare income pair). Table 6 shows that the effect of maternal welfare receipt among long-term welfare pairs (high welfare income pairs) is consistently significant.

Another concern is that a child's disadvantaged characteristics, such as illness or poor health, may result in both maternal welfare use and a child's poor educational attainment. In this case, the fixed-effect estimates may be negatively biased. The only relevant variable available in the PSID is low birth weight. Low birth weight may be correlated with a child's later health status, which may cause both maternal welfare participation and the child's poor educational attainment. To examine the degree of this potential bias, we added a dummy variable indicating low birth weight to all the cross-sectional and fixed-effect analyses and reestimated the models. The inclusion of the low birth weight dummy leads to virtually no change in the estimates of maternal welfare use in all the models. (The results are available from the authors upon request.)

Effect of Patterns of Parental Involvement with Work

Table 7 presents the effect of welfare mothers' work patterns on children's years of schooling by age 23. The first panel shows that the effect of welfare depends greatly on average work hours of welfare mothers. If a mother was ever on welfare and worked, on average, less than 500 hours per year, childhood welfare has a consistently significant and negative effect. Conversely, for mothers on welfare who worked more than 500 hours, welfare is not related to children's educational attainment.

It may be possible that mothers who worked more were on welfare for shorter periods than those who worked less. If this is the case, the results Table 7 may reflect the difference in extent of welfare dependency rather than the difference in work behaviors. We examine this possibility in Table 8, where welfare mothers are placed into four categories. The first is short-term (5 or fewer years on welfare) welfare users who work more than 500 hours per year on average during their children's first 15 years (31

TABLE 6
Effect of Long-Term Welfare Participation and High Welfare Income on Children's Educational Attainment: Fixed-Effect Estimates with Full Sample

	(1) Model 1	(2) Model 2	(3) Model
	Years of completed schooling by 23		
Long-term welfare	-.361**	-.371**	-.367
(>5 years, n=39 pairs)	(.167)	(.171)	(.233)
High welfare income	-.618***	-.636***	-.695***
(>=$1,000, n=42 pairs) (in $1,000)	(.174)	(.180)	(.244)
	High school completion by 19		
Long-term welfare	-.286*	-.282*	-.349*
(>5 years, n=54 pairs)	(.145)	(.150)	(.195)
High welfare income	-.436**	-.410**	-.545**
(>=$1,000, n=67) (in $1,000)	(.176)	(.189)	(.267)
	Years of completed schooling by 19		
Long-term welfare	-.192***	-.185***	-.223***
(>5 years, n=128 pairs)	(.054)	(.055)	(.066)
High welfare income	-.066	-.056	-.088
(>=$1,000, n=151) (in $1,000)	(.089)	(.087)	(.088)

Notes: Standard errors (Huber standard errors of fixed-effect estimates) in parentheses. Models contain same controls as corresponding models in Table 4.

*= significant at 10% level, ** = significant at 5% level, *** = significant at 1% level.

TABLE 7
Effect of Patterns of Maternal Welfare Use and Involvement with Work on Children's Completed Years of Schooling by 23, Cross-Sectional Estimates

(Reference category: no welfare)	(1) Model 1	(2) Model 2	(3) Model 3
0–250 hours work and ever on welfare	-1.315*** (.199)	-.844*** (.196)	-.639*** (.238)
250–500 hours work and ever on welfare	-1.297*** (.237)	-.928*** (.226)	-.721*** (.257)
500–750 hours work and ever on welfare	-.391 (.280)	-.295 (.264)	-.200 (.289)
750–1000 hours work and ever on welfare	-.269 (.271)	-.022 (.254)	.048 (.281)
1000+ hours work and ever on welfare	.321 (.430)	.318 (.396)	.376 (.406)

Notes: N=1219; standard errors in parentheses. Models contain same controls as corresponding models in Table 4.

* = significant at 10% level, ** = significant at 5% level, *** = significant at 1% level.

TABLE 8
Effect of Maternal Involvement with Work and Short-Term versus Long-Term Welfare Use on Children's Education, Cross-Sectional Estimates

(Reference category: no welfare)	(1) Model 1	(2) Model 2	(3) Model 3
		Years of completed schooling by 23	
More than 500 hours work and 5 years or less on welfare	-.133 (.212)	.002 (.199)	.074 (.228)
More than 500 hours work and 6 years or more on welfare	-.490 (.350)	-.348 (.329)	-.459 (.367)
Less than 500 hours work and 5 years or less on welfare	-1.229*** (.248)	-.721*** (.232)	-.520** (.250)
Less than 500 hours work and 6 years or more on welfare	-1.350*** (.195)	-.975*** (.198)	-.854*** (.262)
# of cases		1219	
		High school completion by 19	
More than 500 hours work and 5 years or less on welfare	-.422** (.187)	-.098 (.196)	.099 (.229)
More than 500 hours work and 6 years or more on welfare	-.508 (.324)	-.047 (.343)	.052 (.385)
Less than 500 hours work and 5 years or less on welfare	-1.354*** (.212)	-.854*** (.223)	-.672*** (.247)
Less than 500 hours work and 6 years or more on welfare	-1.828*** (.171)	-1.165*** (.204)	-1.055*** (.271)
# of cases		2512	
		Years of completed schooling by 19	
More than 500 hours work and 5 years or less on welfare	-.298*** (.091)	-.155* (.089)	.104 (.103)
More than 500 hours work and 6 years or more on welfare	-.282* (.156)	-.132 (.154)	-.122 (.169)
Less than 500 hours work and 5 years or less on welfare	-.705*** (.111)	-.455*** (.109)	-.357*** (.117)
Less than 500 hours work and 6 years or more on welfare	-.968*** (.087)	-.688*** (.095)	-.621*** (.122)
# of cases		2249	

Notes: Standard errors in parentheses. Models contain same control variables as in Table 3.

* = significant at 10% level, ** = significant at 5% level, *** = significant at 1% level.

percent of welfare mothers); they were on welfare for 2.4 years on average. The second category is long-term (6 or more years on welfare) welfare users who work more than 500 hours per year (9 percent); they were on welfare for 7.7 years on average. The next category is short-term welfare users who work less than 500 hours (20 percent); they were on welfare for 2.9 years. The last category is long-term welfare users who work less than 500 hours; they were on welfare for 11.1 years on average (40 percent).

Table 8 shows that the effect of childhood welfare is substantially modified by a mother's work behavior. The first panel reports the results from the models of years of schooling by age 23. The first two rows show that if a mother works more than 500 hours, childhood welfare does not have a significant effect on children's years of schooling by age 23. Conversely, if a mother works less than 500 hours, welfare use has a consistently significant and negative effect, regardless of the number of years on welfare, as shown in the next two rows. Notably, long-term welfare use does not have a significant effect if a mother works more than 500 hours, while short-term welfare use has a consistently significant effect if a mother works less than 500 hours. The second and third panels provide results from the models of high school graduation by age 19 and years of schooling by age 19. The results show generally the same pattern as in the top panel, although short-term welfare combined with more than 500 hours of maternal work has significant and negative effects in a few models.

DISCUSSION AND CONCLUSION

This study estimates the relationship between parental welfare receipt and children's adulthood outcomes using family fixed-effect and conventional cross-sectional regression methods. The cross-sectional results confirm findings from previous studies—greater parental welfare receipt is significantly associated with children's poorer educational attainment. The fixed-effect results indicate that the relationship between parental welfare receipt and children's educational outcomes becomes weaker after

controlling for unobserved family characteristics. Yet, the fixed-effect estimation does not eliminate the negative relationship.

It is noteworthy that the relationship between parental welfare receipt and children's educational attainment is not uniform across childhood stages. The results from the cross-sectional analyses show that welfare during early childhood and young adolescence often has significant negative effects, while welfare during middle childhood does not. The fixed-effect results confirm the strong negative effect of welfare during adolescence. However, the negative effect of welfare during early childhood, often found in the cross-family analyses, disappears in all the fixed-effect models, while welfare during middle childhood becomes more significant in the fixed-effect analyses.

The finding that parental welfare use during early childhood may have no effect on children's later educational attainment is consistent with studies that have examined the effect of parental welfare receipt on young children's cognitive development (Hill and O'Neill, 1994; Levine and Zimmerman, 2000). Studies have found that family income during early childhood has a greater positive effect on children's educational attainment (Duncan et al., 1998). Combined with this evidence, our finding of no effect of welfare during early childhood suggests that while welfare may have some positive effects on children's education by increasing family income, the effect is not easily detectable due to the low benefit level of welfare.

The causal interpretation of the consistently negative relationship between welfare during adolescence and later educational attainment is not straightforward. The theories reviewed earlier offer some guidance. If children from welfare families set a career goal that deviates from economic independence, they would be less motivated to attain a higher level of education. Alternatively, welfare receipt may create harm by reducing the social and psychological resources of parents and adolescent children, which in turn adversely affects children's educational attainment. Finally, parental welfare receipt during a child's adolescence may reflect more serious adversity than welfare received during early childhood, thus leading to the stronger negative effect of welfare during adolescence.

These findings on the negative effect of welfare on children's education should be considered in balance with the fact that parental welfare receipt reduces extreme poverty. It should also be kept in mind that children's educational attainment is only one measure of child well-being. Parental welfare receipt may have a positive impact on other fundamental outcomes such as children's health (Currie and Cole, 1993).

Additional analyses suggest that parental welfare receipt is not negatively related to educational attainment if combined with at least quarter-time work by the mother. The educational attainment of children of long-term welfare mothers who work at least at a minimal level is not negatively affected, while even short-term welfare receipt is negatively related to educational attainment if mothers work little. This finding argues against the hypothesis that contact with welfare itself harms children by creating a deviant culture, although it is not clear why a mother's work so greatly modifies the effect of welfare on children. Working mothers may regain a sense of control, self-esteem, and social connections, which in turn positively affects their children (Elliott, 1996). Working mothers also may help children to recognize the significance of work and to prepare for future economic careers (Mead, 1997a). Or a mother's work may represent the availability of familial or extrafamilial support, which enables the mother to work and benefits children at the same time (Edin and Lein, 1997).

Research suggests that work is beneficial for mothers and their children in general, but there is little evidence that full-time work without welfare is a better option than combining work and welfare for single-mother families (Kulis, 1988). Studies show that many welfare mothers who voluntarily leave welfare do not achieve economic independence and are often overwhelmed by conflicts between work and family responsibility (Harris, 1996; Edin and Lein, 1996). Full-time work may not be realistic, especially for many single mothers with young children (Ellwood, 2000). Part-time work combined with welfare may better benefit those mothers and children.

The TANF era of welfare policy has sought to rapidly move welfare recipients into jobs and to reduce welfare receipt, and has experienced considerable success in doing so. The findings from this

study provide suggestive evidence that this thrust will improve the long-term educational attainment of children of TANF recipients. However, TANF also ushered in many other major changes in the design and operation of welfare programs. Some of these, such as possible reductions in total welfare income during childhood due to time limits, may adversely affect schooling and other child outcomes. Future research using TANF-era data will be needed before we will understand the long-run impact on children of this dramatic experiment in social policy.

TABLE A1
Descriptive Statistics of Key Variables

Characteristics	Individual Sample		Sibling Sample
	Unweighted Mean (SD)	Weighted Mean (SD)	Unweighted Mean (SD)
Outcome			
Years of schooling by age 23	12.8(1.9)	13.1(1.9)	12.8 (1.9)
High school graduate by age 19	.75 (.43)	.80 (.39)	.75 (.43)
Years of schooling by age 19	11.9 (1.1)	12.1 (1.1)	11.9 (1.1)
Independent Variables			
Ever on welfare	.22 (.41)	.14 (.35)	.22 (.42)
Years on welfare	1.45(3.4)	.85(2.65)	1.50(3.57)
Average annual welfare income	602 (1813)	332(1237)	664 (1965)
Control Variables			
Black	.38 (.48)	.14 (.35)	.37 (.48)
Female	.47 (.49)	.47 (.49)	.48 (.50)
First born child	.41 (.49)	.39 (.48)	.31 (.46)
Birth order missing	.04 (.20)	.04 (.20)	.02 (.16)
Grandparent poor	.42 (.49)	.34 (.47)	.41 (.49)
Grandparent poor missing	.03 (.18)	.02 (.15)	.02 (.17)
Protestant	.34 (.47)	.37 (.48)	.37 (.48)
Catholic	.17 (.37)	.23 (.42)	.17 (.38)
Baptist	.36 (.48)	.25 (.43)	.34 (.48)
Jewish	.01 (.1)	.01 (.13)	.00 (.07)
Proportion of years in south	.47 (.48)	.33 (.45)	.46 (.48)
Proportion of years in northeast	.14 (.34)	.21 (.40)	.14 (.34)
Proportion of years in north-central	.24 (.41)	.28 (.43)	.26 (.43)
Proportion of years in SMSA	.64 (.42)	.60 (.42)	.63 (.43)
Proportion of years with head disabled	.12 (.21)	.11 (.20)	.12 (.20)
Average unemployment rate	6.66(1.7)	6.64(1.8)	6.70(1.7)
Birth cohort	6.53(3.4)	6.24(3.3)	6.44(3.1)
Mother, less than high school	.32	.25	.33
Mother, high school graduate	.48 (.49)	.50 (.50)	.48 (.50)
Mother, attended college	.12 (.32)	.14 (.34)	.12 (.33)
Mother, college graduate	.08 (.27)	.11 (.30)	.07 (.27)
Mother, education missing	.00 (.03)	.00 (.01)	.00 (.00)

(table continues)

TABLE A1, continued

Characteristics	Individual Sample Unweighted Mean (SD)	Individual Sample Weighted Mean (SD)	Sibling Sample Unweighted Mean (SD)
Father, less than high school	.20	.23	.21
Father, high school graduate	.39 (.48)	.38 (.48)	.38 (.49)
Father, attended college	.18 (.38)	.19 (.39)	.20 (.40)
Father, college graduate	.15 (.46)	.20 (.40)	.15 (.35)
Father, education missing	.08 (.27)	.03 (.18)	.06 (.25)
Average income ($10,000)	3.93 (2.48)	4.54(2.7)	3.94 (2.52)
Average family size	4.75(1.4)	4.59(1.3)	5.02 (1.47)
Mother's age at birth	24.6(5.6)	25.6(5.6)	24.3 (5.0)
Mother's age at birth missing	.002(.05)	.001(.03)	.00 (0.00)
Average number of children	2.74(1.2)	2.56(1.0)	3.03 (1.24)
Proportion of years with one parent	.20 (.31)	.14 (.27)	.19 (0.31)
Proportion of years with nonparent head	.04 (.16)	.02 (.11)	.02 (0.13)
Proportion of years when parental marital status changed	.043(.07)	.038(.06)	.03(.07)
Marital status change missing	.01(.12)	.00 (.08)	.00(.08)
Annual work hours, father (1,000 hrs)	2.033 (.63)	2.12(.61)	2.04(.63)
Work hours missing, father	.10 (.31)	.05 (.22)	.08(.28)
Average annual work hours, mother (1,000 hours)	.746(.57)	.717(.55)	.714(0.55)
Proportion of years when mother worked	.55 (.30)	.55 (.29)	.54(.30)
Mother worked missing	.01 (.12)	.00 (.08)	.01(.08)
Proportion of years moved	.22 (.18)	.20 (.18)	.23(.18)
Sample Size			
High school graduate by age 19 # of children (families)	2,512		1,561 (671)
Years of schooling by age 23 # of children (families)	1,219		537 (247)

Source: Panel Study of Income Dynamics

References

Administration for Children and Families. 1999. Temporary Assistance for Needy Families 1936–1999. Table taken from the Web at <http://www.acf.dhhs.gov/news/stats/3697.htr>. U.S. Department of Health and Human Services.

An, C., R. Haveman, and B. Wolfe. 1993. "Teen Out-of-Wedlock Births and Welfare Receipt: The Role of Childhood Events and Economic Circumstances." *Review of Economics and Statistics* 75: 195–208.

Aaronson, D. 1998. "Using Sibling Data to Estimate the Impact of Neighborhoods on Children's Educational Outcomes." *Journal of Human Resources* 33: 915–946.

Atkinson, J. W. 1964. *An Introduction to Motivation*. Princeton, NJ: Van Nostrand.

Bane, M. J., and D. T. Ellwood. 1994. *Welfare Realities: From Rhetoric to Reform*. Cambridge, MA: Harvard University Press.

Becker, G. S. 1981. *A Treatise on the Family*. Cambridge, MA: Harvard University Press.

Becker, G. S., and N. Tomes. 1986. "Human Capital and the Rise and Fall of Families." *Journal of Labor Economics* 4(3): S1–S39.

Blank, R. 1989. "The Effect of Medical Need and Medicaid on AFDC Participation." *Journal of Human Resources* 24: 54–87.

Boggess, S. 1998. "Family Structure, Economic Status, and Educational Attainment." *Journal of Population Economics* 11: 205–222.

Brooks-Gunn, J. 1995. Strategies for Altering the Outcomes of Poor Children and Their Families." In *Escape from Poverty: What Makes a Difference for Children?*, edited by P. L. Chase-Lansdale and J. Brooks-Gunn. Cambridge, MA: Cambridge University Press. Pp. 87–120.

Brooks-Gunn, J., G. J. Duncan, P. K. Klebanov, and N. Sealand. 1993. "Do Neighborhoods Influence Child and Adolescent Development?" *American Journal of Sociology* 99: 353–395.

Brooks-Gunn, J., G. J. Duncan, and N. Maritato. 1997. "Poor Families, Poor Outcomes: The Well-Being of Children and Youth." In *Consequences of Growing Up Poor*, edited by G. J. Duncan and J. Brooks-Gunn. New York: Russell Sage Foundation. Pp. 1–17.

Brooks-Gunn, J., G. Guo, and F. Furstenberg. 1993. "Who Drops Out of and Who Continues beyond High School?: A 20-Year Follow-Up of Black Urban Youth." *Journal of Research on Adolescence* 3: 271–294.

Chamberlain, G. 1980. "Analysis of Covariance with Qualitative Data." *Review of Economic Studies* 47(1): 225–238.

Chase-Lansdale, P. L. 1998. "How Developmental Psychologists Think about Family Process and Child Development in Low Income Families." Paper presented at Family Process and Child Development in Low Income Families, Joint Center for Poverty Research, Chicago, IL.

Chase-Lansdale, P. L., and J. Brooks-Gunn, eds. 1995. *Escape from Poverty: What Makes a Difference for Children?* Cambridge, MA: Cambridge University Press.

Cohen, J., and P. Cohen. 1983. *Applied Multiple Regression/Correlation Analysis for the Behavioral Sciences*. Hillsdale, NJ: Lawrence Erlbaum.

Collins, A., and J. L. Aber. 1997. "Issue Brief 1: How Welfare Reform Can Help or Hurt Children." New York: Columbia University, National Center for Children in Poverty.

Corcoran, M. 1995. "Rags to Rags: Poverty and Mobility in the United States." *Annual Review of Sociology* 21: 237–267.

Corcoran, M., and T. Adams. 1995. "Family and Neighborhood Welfare Dependency and Sons' Labor Supply." *Journal of Family and Economic Issues* 16(2/3): 239–263.

Currie, J. 1995. *Welfare and the Well-Being of Children*. Chur, Switzerland: Harwood Academic Publishers.

Currie, J. 1998. "The Effect of Welfare on Child Outcomes. In *Welfare, the Family, and Reproductive Behavior: Research Perspectives*, edited by R. Moffitt. Washington, DC: National Academy Press.

Currie, J., and N. Cole. 1993. "Welfare and Child Health: The Link between AFDC Participation and Birth Weight." *American Economic Review* 83: 971–985.

Danziger, S., M. Corcoran, S. Danziger, C. Heflin, A. Kalil, J. Levine, D. Rosen, K. Seefeldt, K. Siefert, and R. Tolman. 1999. "Barriers to the Employment of Welfare Recipients." Discussion Paper no. 1193-99, Institute for Research on Poverty, University of Wisconsin–Madison.

Danziger, S., R. Haveman, and R. Plotnick. 1981. "How Income Transfer Programs Affect Work, Savings, and the Income Distribution: A Critical Review." *Journal of Economic Literature* 19: 975–1028.

Duncan, G. J. 1994. "Families and Neighbors as Sources of Disadvantage in the Schooling Decisions of White and Black Adolescents." *American Journal of Education* 103: 21–53.

Duncan, G. J., and J. Brooks-Gunn. 1997. "Income Effects across the Life Span: Integration and Interpretation." In *Consequences of Growing Up Poor*, edited by G. J. Duncan and J. Brooks-Gunn. New York: Russell Sage Foundation.

Duncan, G. J., and S. Hoffman. 1990. "Welfare Benefits, Economic Opportunities, and the Incidence of Out-of-Wedlock Births among Black Teenage Girls." *Demography* 27: 519–557.

Duncan, G. J., and J. Yeung. 1995. "Extent and Consequences of Welfare Dependence among America's Children." *Children and Youth Services Review* 17(1/2): 157–182.

Duncan, G. J., J. Yeung, J. Brooks-Gunn, and J. Smith. 1998. "How Much Does Childhood Poverty Affect the Life Chances of Children." *American Sociological Review* 63: 406–423.

Edin, K., and L. Lein. 1996. *Making Ends Meet: How Single Mothers Survive Welfare and Low-Wage Work*. New York: Russell Sage Foundation.

Edin, K., and L. Lein. 1997. "Work, Welfare, and Single Mothers' Economic Survival Strategies." *American Sociological Review* 62: 253–266.

Elder, G. H. J. 1985. "Families, Kin, and the Life Course: A Sociological Perspective." In *Life Course Dynamics: From 1968 to the 1980s*, edited by G. H. J. Elder. Ithaca, NY: Cornell University Press.

Elliott, M. 1996. "Impact of Work, Family, and Welfare Receipt on Women's Self-Esteem in Young Adulthood." *Social Psychology Quarterly* 59: 80–95.

Ellwood, D. T. 1994. "Understanding Dependency." In *Welfare Realities: From Rhetoric to Reform*, edited by M. J. Bane and D. T. Ellwood. Cambridge, MA: Harvard University Press. Pp. 67–123.

Ellwood, D. T. 2000. "Anti-Poverty Policy for Families in the Next Century: From Welfare to Work and Worries." *Journal of Economic Perspectives* 14(1): 187–198.

Entwisle, D. R., and K. L. Alexander. 1989. "Early Schooling as a 'Critical Period' Phenomenon." In *Sociology of Education and Socialization* vol. 8, edited by K. Namboodiri and R. G. Corwin. Greenwich, CT: JAI Press.

Falaris, E. M., and H. E. Peters. 1998. "Survey Attrition and Schooling Choices." *Journal of Human Resources* 33: 531–554.

Fitzgerald, J., P. Gottschalk, and R. Moffitt. 1998. "An Analysis of the Impact of Sample Attrition on the Second Generation of Respondents in the Michigan Panel Study of Income Dynamics." *Journal of Human Resources* 33: 300–344.

Furstenberg, F., J. Brooks-Gunn, and S. P. Morgan. 1987. "Adolescent Mothers and Their Children in Later Life." *Family Planning Perspectives* 19: 142–151.

Furstenberg, F., J. Levine, and J. Brooks-Gunn. 1990. "The Children of Teenage Mothers: Patterns of Childbearing in Two Generations." *Family Planning Perspectives* 22: 54–61.

Goodban, N. 1985. "The Psychological Impact of Being on Welfare." *Social Service Review* 59: 403–422.

Gottschalk, P. 1992. "The Intergenerational Transmission of Welfare Participation: Facts and Possible Causes." *Journal of Policy Analysis and Management* 11: 254–272.

Gottschalk, P. 1996. "Is the Correlation in Welfare Participation across Generations Spurious?" *Journal of Public Economics* 63: 1–25.

Harris, K. M. 1993. "Work and Welfare among Single Mothers in Poverty." *American Journal of Sociology* 99: 317–352.

Harris, K. M. 1996. "Life after Welfare: Women, Work and Repeat Dependency." *American Sociological Review* 61: 407–426.

Haveman, R., and B. Wolfe. 1994. *Succeeding Generations: On the Effects of Investments in Children*. New York: Russell Sage Foundation.

Haveman, R., and B. Wolfe, and J. Spaulding. 1995. "Childhood Events and Circumstances Influencing High School Completion." *Demography* 28: 133–157.

Heckman, J. J. 2000. "Policies to Foster Human Capital." Working Paper 154, Joint Center for Poverty Research.

Hill, M. 1992. *The Panel Study of Income Dynamics: A User's Guide*. Newbury Park, CA: Sage Publications.

Hill, M., and G. Duncan. 1987. "Parental Family Income and the Socioeconomic Attainment of Children." *Social Science Research* 16: 39–73.

Hill, M., and J. O'Neill. 1994. "Family Endowments and the Achievement of Young Children with Special Reference to the Underclass." *Journal of Human Resources* 29: 1064–1100.

Knox, V. W., and M. J. Bane. 1994. "Child Support and Schooling." In *Child Support and Child Well-Being*, edited by I. Garfinkel, S. McLanahan, and P. Robins. Washington, DC: Urban Institute Press.

Kulis, S. 1988. "Emotional Distress Following AFDC Cutbacks." *Social Science Quarterly* 69: 399–415.

Levine, P. B., and D. J. Zimmerman. 2000. "Children's Welfare Exposure and Subsequent Development." Working Paper 130, Joint Center for Poverty Research.

Lewis, O. 1969. "The Culture of Poverty." In *On Understanding Poverty: Perspectives from the Social Sciences*, edited by D. P. Moynihan. New York: Basic Books.

McLanahan, S. 1985. "Family Structure and the Reproduction of Poverty." *American Journal of Sociology* 90: 873–901.

McLanahan, S., and G. D. Sandefur. 1994. *Growing Up with a Single Parent: What Hurts, What Helps?* Cambridge, MA: Harvard University Press.

Mead, L. 1986. *Beyond Entitlement: The Social Obligations of Citizenship*. New York: Free Press.

Mead, L. 1992. *The New Politics of Poverty: The Non-Working Poor in America*. New York: Basic Books.

Mead, L. 1997a. "The Rise of Paternalism." In *The New Paternalism: Supervisory Approaches to Poverty*, edited by L. Mead. Washington, DC: Brookings Institution Press.

Mead, L. 1997b. "From Welfare to Work: Lessons from America." In *From Welfare to Work: Lessons from America*, edited by A. Deacon. London: IEA Health and Welfare Unit.

Moffitt, R. 1992. "Incentive Effects of the U.S. Welfare System: A Review." *Journal of Economic Literature* 30: 1–61.

Moffitt, R., and B. Wolfe. 1992. "The Effect of the Medicaid Program on Welfare Participation and Labor Supply." *Review of Economics and Statistics* 74: 615–626.

Moore, K. A., and A. K. Driscoll. 1997. "Low-Wage Maternal Employment and Outcomes for Children: A Study." *The Future of Children* 7(1): 122–127.

Moore, K. A., M. J. Zaslow, M. J. Coiro, S. M. Miller, and E. B. Magenheim. 1995. "The JOBS Evaluation: How Well Are They Faring? AFDC Families with Preschool-Aged Children in Atlanta at the Outset of the Jobs Evaluation." Washington, DC: Department of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation.

Murray, C. 1984. *Losing Ground: American Social Policy, 1950–1980*. New York: Basic Books.

Nichols-Casebolt, A. 1986. "The Psychological Effects of Income Testing Income-Support Benefits." *Social Service Review* 60: 287–302.

Patterson, J. T. 1994. *America's Struggle against Poverty: 1900–1994*. Cambridge, MA: Harvard University Press.

Peters, H. E., and N. C. Mullis. 1997. "The Role of Family Income and Sources of Income in Adolescent Achievement." In *Consequences of Growing Up Poor*, edited by G. J. Duncan and J. Brooks-Gunn. New York: Russell Sage Foundation.

Plotnick, R. D. 1990. "Welfare and Out-of-Wedlock Childbearing: Evidence from the 1980s." *Journal of Marriage and the Family* 53: 735–746.

Plotnick, R. D., and S. Hoffman. 1999. "The Effect of Neighborhood Characteristics on Young Adult Outcomes: Alternative Estimates." *Social Science Quarterly* 80: 1–18.

Popkin, S. J. 1990. "Welfare: Views from the Bottom." *Social Problems* 37(1): 64–79.

Rainwater, L. 1982. "Stigma in Income-Tested Programs."In *Income-Tested Transfer Programs*, edited by I. Garfinkel. New York: Academic Press. Pp. 19–46.

Ramey, C. T., and S. L. Ramey. 1998. "Early Intervention and Early Experience." *American Psychologist* 53(2): 109–120.

Rosenberg, M., C. Schooler, and C. Schoenbach. 1989. "Self-Esteem and Adolescent Problems: Modeling Reciprocal Effects." *American Sociological Review* 54: 1004–1018.

Rutter, M. 1987. "Psychological Resilience and Protective Mechanisms." *American Journal of Orthopsychiatry* 57(3): 316–331.

Scott, E. K., K. Edin, A. S. London, and J. M. Mazelis. 1999. "My Children Come First: Welfare-Reliant Women's Post-TANF Views of Work-Family Tradeoffs, Neighborhoods, and Marriage." Working Paper 115, Joint Center for Poverty Research.

Seccombe, K. 1999. *"So You Think I Drive a Cadillac?": Welfare Recipients' Perspectives on the System and Its Reform*. Boston: Allyn and Bacon.

Sroufe, L. A., and J. Fleeson. 1986. "Attachment and the Construction of Relationships." In *Relationship and Development*, edited by W. W. Hartup and Z. Rubin. Hillsdale, NJ: Lawrence Erlbaum. Pp. 51–72.

Teachman, J. D., K. M. Paasch, R. D. Day, and K. P. Carver. 1997. "Poverty during Adolescence and Subsequent Educational Attainment." In *Consequences of Growing Up Poor*, edited by G. J. Duncan and J. Brooks-Gunn. New York: Russell Sage Foundation. Pp. 132–189.

Wolfe, B., R. Haveman, D. Ginther, and C.-B. An. 1996. "The 'Window Problem' in Studies of Children's Attainments: A Methodological Exploration." *Journal of American Statistical Association* 913: 970–982.

Zaslow, M. J., and C. A. Emig. 1997. "When Low-Income Mothers Go to Work: Implications for Children." *The Future of Children* 7(1): 110–115.

BEST COPY AVAILABLE